

Electrical Licensing and Inspection

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Bulletin - Electrical Code Interpretation

LIGHTING FIXTURES IN POULTRY CONFINEMENT BUILDINGS

Electrical installations in poultry confinement buildings are subject to the general requirements in the National Electrical Code® (NEC®) and the specific requirements in NEC® Article 547 for Agricultural Buildings.

In general, animal confinement buildings often may be subject to one or more of the following conditions, including, but not limited to: 1) dust from animal feathers and coats, livestock bedding, poultry litter, feed products, salt products, and corrosive minerals; 2) moisture from animal respiration, evaporation of animal waste, and washing and sanitizing operations; 3) corrosive vapors such as ammonia and other gases from poultry litter and animal waste.

NEC® Article 547 generally requires that lighting fixtures shall be installed to minimize the entrance of dust, foreign matter, moisture, and corrosive material. Any lighting fixture that may be subject to physical damage shall be protected with a suitable guard. A lighting fixture that may be exposed to water from condensation, building cleansing water, or other solutions shall be watertight.

Porcelain keyless lampholders of the type described below have been installed in many Minnesota poultry confinement buildings for several decades where the subject buildings met the stated environmental conditions. When poultry confinement buildings are properly maintained, such lighting installations have been very reliable.

One-piece porcelain keyless lampholders with a brass screw-shell and one pair of mounting holes that will not permit dust or water to enter the outlet box, mounted vertically with the lamp below the lampholder on a watertight, dusttight nonmetallic outlet box, with an effective gasket between the outlet box and the lampholder, may be permitted to be installed in poultry confinement buildings when all of the following conditions are met:

- The poultry confinement building shall not have excessive dust accumulations, corrosive vapors or gases, or excessive moisture to the extent that any of the foregoing conditions would cause deterioration of the permitted lighting fixtures, and
- The fixture shall not be exposed to water from condensation, building cleansing water, or solutions, and
- The permitted lighting fixtures shall not pose an additional risk of fire due to the presence of readily ignitable dust or bedding in the vicinity of the lighting fixtures.

Lighting fixtures that are listed and labeled and identified as being suitable for the location shall be installed in all poultry confinement buildings if the conditions stated above are not met.

The Board of Electricity is not obligated to make further inspections after the final electrical inspection of a completed electrical installation. Therefore, it is the sole responsibility of building owners to maintain all buildings in such a condition that the permitted lighting fixtures will continue to be suitable for the location under the provisions of the National Electrical Code® and this bulletin.

Questions concerning this bulletin should be directed to the Minnesota Board of Electricity.